UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

H. CRISTINA CHEN-OSTER; LISA PARISI; and SHANNA ORLICH,

Plaintiffs,

v.

GOLDMAN, SACHS & CO. and THE GOLDMAN SACHS GROUP, INC.

Defendants.

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10 Civ. 6950 (AT) (JCF)

EXPERT REPORT OF MICHAEL P. CURRAN

Report of Michael P. Curran

in

Chen-Oster, et al.* v. *Goldman, Sachs & Co., et al.

I. Qualifications

1. I am a Director of Towers Watson, the global leader in executive compensation consulting. My business focus is on providing compensation and related consulting advice to financial services firms. The firms I advise include commercial banks, investment banks, securities firms, hedge funds and private equity firms. The areas in which I counsel clients include pay approaches and structures, pay levels, pay and productivity linkages, regulatory initiatives and their impact on pay, and pay trends.

2. I graduated from Cornell University in 1979 with a Bachelor of Science degree in Industrial & Labor Relations.

3. After an initial position in the paper industry, I joined Morgan Stanley in February 1981 as an Associate in their Human Resources department focusing on compensation. I also worked in Morgan Stanley's Investment Banking Division as a Human Resource generalist responsible for managing the Investment Banking Analyst program.

4. In August 1983, I joined McLagan Partners, a leading compensation consulting firm focused on the financial services industry. At McLagan, I progressed from Associate to Principal (1988) to Managing Director (1990) to Chief Operating Officer (1995). My client focus was split between asset management and investment banking until 1990. After 1990, I shifted my focus to take on lead relationship management responsibilities for most of the major United States ("US") banks (i.e., Bankers Trust, Chase, Chemical, Citibank, and JPMorgan), most of the major investment banks (i.e., First Boston, Lehman Brothers, Morgan Stanley, and Salomon Brothers) and several of the leading European banks (i.e., Deutsche Bank, Swiss Bank, and UBS). I was also responsible for developing and implementing McLagan's Japanese compensation study program. Finally, I was responsible for directing the firm's compensation study program globally.

5. In April 2003, I joined MGMC, a boutique compensation consulting firm focused on pay structures and levels among leading banks and investment banks. I was President of MGMC and responsible for managing client relationships with key firms such as Bank of America, Citigroup, Credit Suisse, Deutsche Bank, HSBC, JPMorgan, and UBS.

6. In January 2007, Towers Perrin (currently Towers Watson) acquired MGMC, and I became head of the firm's Global Financial Services unit with similar areas of responsibility and focus as in my role at MGMC.

7. An area of focus for me over the years has been Board of Directors and Compensation Committee advice. I currently am the Compensation Committee advisor to Barclays PLC and have been the advisor in the past to JPMorgan Chase and HSBC. I have also worked with the Compensation Committees of Citigroup, Credit Suisse, Deutsche Bank, and UBS. In 2012, I acted as the advisor to the Independent Compensation Review Panel established by Deutsche Bank.

8. My time is billed at the rate of $1,000 per hour, which is my standard hourly rate. Payment to me is not contingent on my opinions in this matter, nor is there any connection between my pay and the revenues associated with this or any other assignment. I reserve the right to supplement this report if and when I become aware of additional relevant information.

II. Assignment

9. I understand that the plaintiffs in this case seek to represent a class of women employed by Goldman, Sachs & Co. as Associates or Vice Presidents in the United States within Goldman Sachs' revenue producing divisions between July 7, 2002 and the present. The four revenue producing divisions are: Investment Banking ("IBD") (which consists of Classic and Financing Groups); Investment Management ("IMD") (which consists of Goldman Sachs Asset Management and Private Wealth Management); Merchant Banking ("MBD"); and Securities (which consists of Fixed Income, Currency, and Commodities ("FICC") and Equities).

10. Counsel for Goldman Sachs asked me to provide my opinions on the following subjects:

(a) The variation in jobs held by Associates and Vice Presidents in financial services firms such as Goldman Sachs;

(b) The variation in compensation among jobs and over time in financial services firms and the reasons for that variation;

(c) The impact of lateral hiring on compensation within financial services firms;

(d) The practice in the financial services industry of manager discretion in setting employee compensation and the reasons for that practice; and

(e) The importance in the financial services industry of setting appropriate compensation.

III. Summary of Opinions

11. In my experience, Associates and Vice Presidents in the financial services industry hold a great variety of jobs. These jobs differ significantly, including in the type of products involved, the type of activity the employee is engaged in, the required skill set, and the clients served.

12. Compensation among Associates and Vice Presidents in the financial services industry varies widely, depending on such factors as the financial success of the firm and the business unit in which they work, individual productivity, and market demand.

13. Lateral hiring can have a significant impact on compensation. While financial services firms generally prefer to promote and transfer from within, external hiring can be critical to a firm's efforts to enter new markets and serve new clients, and significant premiums are typically needed to attract lateral hires.

14. Managers across the financial services industry typically—and necessarily—exercise significant judgment in setting compensation. The variety and complexity of jobs in the industry prohibit any purely formulaic determination of compensation, requiring that managers use their judgment in applying compensation criteria.

15. Firms in the financial services industry are highly attuned to the need to correlate compensation with contribution. Compared to many other industries, compensation and benefits represent a high percentage of costs for financial industry firms, and mobility between firms is high, creating an efficient market for talent and requiring firms to achieve a high level of precision in setting compensation.

IV. The Variety of Jobs within the Financial Services Industry

16. Associates and Vice Presidents in the financial services industry in the United States hold a very wide variety of jobs (or roles), reflecting the wide range of products and services these firms provide their clients. This report focuses on jobs within the revenue producing divisions referenced in paragraph 9 above (and does not address jobs in areas outside these divisions, such as, for example, consumer banking or insurance).

17. Firms in the financial services industry are organized into sub-units reflecting, among other things, the different products and services they offer clients. Firms typically have several divisions, and within divisions firms typically have a substantial number of smaller business units, which focus on different products or market segments, and even within business units there can be many different jobs. For example:

(a) Investment Banking divisions assist corporate and government clients in evaluating their capital structure, analyzing debt ratings and their implications for capital raising, and raising capital through public offerings and private placements (which involves a range of analysis, deal structuring, market testing, identifying buyers, and selling the instruments to investors). In some cases, clients may be in a distressed economic condition (such as bankruptcy or receivership) and the activities are further complicated by additional legal considerations. Bankers also assist clients in acquiring and divesting companies or business units within companies. In this role, they analyze potential targets and/or buyers for best fit (strategically and economically), develop plans for buying or selling the entity in question, and execute the transaction. Each major function (such as underwriting, mergers and acquisitions ("M&A"), bankruptcy/reorganization, valuations, and financing) typically has its own dedicated staff.

(b) Equities divisions include sales and trading business units or functions that are involved in buying and selling equity and equity-linked securities and derivatives. The product range with which they are involved includes common and preferred stocks, convertibles, options, futures, and more complex derivatives (some sold on exchanges but many customized). These units are involved in structuring transactions, identifying buyers and sellers of products, communicating market and economic trends, discussing the firm's research, and executing transactions. Each of the major products, including listed stocks, preferreds, convertibles, options, futures, and index options, has both sales and trading jobs. In addition, derivatives products have structuring and analytical/modeling jobs that are responsible for the creation of customized products.

(c) Fixed Income divisions have all of the same roles (i.e., sales, trading, structuring, and modeling) as Equities but very different products. There are also typically more product categories, and each product category (such as Governments, Mortgages, and Corporates) has its own sub-categories, and each may have unique job responsibilities. For example, the Governments product category generally has sub-categories for at least US, United Kingdom, and Japanese government bonds, and emerging markets sovereign debt. US governments are considered 'risk free' from a credit perspective and, therefore, trade on the basis of interest rates only. Other foreign government debt, however, does not necessarily have the same market perspective and trades on a basis of interest and credit analysis. This makes the job of the sales person or trader for each product significantly different in terms of required skills and knowledge.

(d) Investment Management divisions have a different set of jobs from either the Investment Banking, Equity or Fixed Income areas. On the asset management side of the business, the job categories include: portfolio management, research, trading, sales, marketing, client service, analytics, and relationship management. On the private wealth side, job categories include sales, private banking, trust and estate, and client services.

(e) Merchant Bank divisions make investments on behalf of the firm (and others) as principal, and these businesses also have a different set of specialized professionals (including portfolio managers, financial analysts, relationship managers, and client service representatives).

18. The breadth of different jobs within the financial services industry is illustrated by an annual study of compensation that Towers Watson conducts for many of the areas in which financial services firms operate (i.e., Investment Banking, Equities, and FICC). Towers Watson collects data from leading firms (which are listed in Appendix 1 and include Goldman Sachs) and reports back to participants (on an unattributed basis and after compensation has been delivered) on how their pay compares to peer organizations. A review of participant submissions to our 2013 program shows the large number of categories firms in the industry use for identifying different job types. The table below summarizes the range of categories in just the Fixed Income ("FICC") divisions at these banks by product, function (e.g. sales, trading), and role within a function.

Job Identifying Categories Used by Firms in FICC

Organizational Category	*Typical Number of Categories per Firm*	*Largest Number of Categories Amongst Major Firms*
Department/Product	25 - 50	67
Functions	5 - 8	11
Functional Titles	30 - 50	100+

V. Variation in Compensation Among Jobs in the Financial Services Industry

19. As one would expect given the wide variety of different jobs within financial services firms, there is great variation in pay across jobs. Those differences arise from a number of factors. Different businesses have different—often dramatically different—economics and even within businesses the economics shift over time and are different for various job functions within a business. As firms in the industry seek to align pay with performance, the variation in business economics is a key consideration in pay decisions. For example, firms trade New York

Stock Exchange listed equities for clients and are paid a commission charge for execution. Due to competition, the rate that firms can charge for executing these trades has declined steadily from 1975 (when commission rates were deregulated) to today. Currently, firms are able to charge five cents a share (or less) for executing a trade. This commission has to cover all of the firms' costs (including sales, trading, research, trade clearing, technology support, and overhead). As might be expected, this business is now only modestly profitable, and firms no longer pay sales staff on a commission rate as more volume may not mean more profits. Conversely, more complex or customized products generally are more profitable, as clients are willing to pay for the unique features of a particular product.

20. The differences in economics are even greater at the product level than they are at the division or business unit level. Transactions in some products (e.g., municipal finance, money markets) are often not profitable, but firms have determined that, overall, it is beneficial for them to be considered a "full service firm" and offer the products to support clients despite thin (and sometimes non-existent) profit margins. A good example of this is Salomon Brothers' decision to exit the public finance and money market business in the 1990s, stating that they could not operate them on a profitable basis, but they were the only firm to completely abandon these businesses. Other firms scaled back their commitment in terms of employees and other resources, and compensation paid to these employees is commensurate with the firm's profit margin. Conversely, transactions in some product areas (such as M&A) have very strong profit margins leading to higher pay.

21. The table below illustrates the variation in pay by business and over time, summarizing the differences in pay by broad function (sales or trading) within Equities and Fixed Income units for the period of 2008 – 2011 (within the firms listed in Appendix 1). The figures in the table show the percentage of overall average compensation for the category represented by the average for the subcategory. The chart shows, for instance, that within the broad category of Equities Sales and Trading, salespeople on average were paid 5% more than traders in 2009, but in 2010 salespeople were paid 15% more, a swing of 10% in just one year. Similarly, in Fixed-Income, traders were paid more than salespeople in 2008, but less than salespeople in 2011.

Index of Function to Business Area Total Compensation

	2008	*2009*	*2010*	*2011*
Equities Sales & Trading	*100%*	*100%*	*100%*	*100%*
- *Sales*	103%	101%	105%	102%
- *Trading*	95%	96%	91%	96%
Fixed-Income Sales & Trading	*100%*	*100%*	*100%*	*100%*
- *Sales*	99%	100%	106%	101%
- *Trading*	101%	100%	96%	96%

22. Beyond the sources of differences in pay described above, there is often even greater variation in pay among individuals within the same job, same function, same division, and same firm, because of differences in performance of the individuals and because even very similar roles can require very specialized skill sets. Individual performance in any of the roles can vary significantly, and firms seek to align pay with differences in performance. These differences may be difficult to identify; many measures such as volume (or even revenues) may not be indicative of profitability. Thus, as described below, in setting compensation managers must consider a combination of quantitative performance measures as well as qualitative measures such as quality of transaction, ability of the employee to find and develop relatively unknown clients, and timeliness.

23. The factors that influence compensation in the financial industry lead not only to significant differences in compensation among jobs but also to substantial year-to-year variation in compensation for the same job. As the profitability of a business, individual productivity, and other factors change, compensation for a role can change dramatically over time.

24. I understand that plaintiffs' statistician has done an analysis of compensation at Goldman Sachs that includes Affirmative Action Plan "job groups." I understand these job groups to be broad groupings pursuant to government regulatory requirements that include in one group employees in different divisions, business units, and a wide range of functions. In my experience, these groups are not used in the financial services industry to set compensation.

VI. The Impact of Lateral Hiring on Compensation

25. A significant source of difference in pay in the financial services industry is lateral recruiting. While firms would generally prefer to promote and transfer from within when they can, they do not always have the talent positioned to take on new responsibilities, or to start a new business or offer a new product. Firms also may be concerned that they will lose revenues from existing businesses if they transfer employees to start new product areas. Also, there is a high degree of specialization in markets (e.g., stocks versus bonds) and products (e.g., corporate versus government bonds). Individuals develop expertise in their product area, create relationships with clients, learn how to utilize internal firm resources, and become proficient over time in their particular function. This can make it difficult to transfer employees across products and functions.[1] Recruiting of external talent can thus be critical to filling open positions or starting new product areas.

26. The financial services industry is characterized by rapid product innovation. Given the economic opportunities offered by products that are in high demand, financial services firms cannot remain competitive if they are caught without sufficient employee resources in new "hot" areas. Over the years, these "hot" areas shift as the product/service becomes saturated through competition, client/investor demand shrinks or, occasionally, legal or regulatory changes occur that make the product or service less attractive.

27. Examples of areas that have been in high demand over the years include: derivatives (equity, bond, and commodity), prime brokerage, US governments, Japanese governments, emerging markets equities, M&A bankers, and bankers specializing in industry sectors with a high level of activity such as technology. Of these high demand areas, some have been "hot" for short periods of time (such as US governments in the 1990s when there were over 40 primary government dealers) and others have episodically become "hot" as supply and demand shift. Examples of areas that have been "hot" several times over the last 25 years

[1] There are exceptions to this. For instance, employees at a very junior level are relatively inexperienced (and therefore paid less), and the "acquiring" unit is not taking on a large burden in retraining a specialized individual if the transferred employee is not successful in the role. Also, many firms transfer management employees from one business area to another as their skill set has evolved from being a product or functional specialist to one whose main responsibility is general strategy, oversight, and client relationship.

include: M&A, technology, emerging markets, mortgage-backed structural products, and derivatives generally.

28. As firms see activity rise dramatically in a hot area, they want to capture as much market share as possible during the period of growth. Accordingly, they are willing to recruit talent from competitors for significant premiums. Premiums of 25% of an employee's annual compensation are typical, and higher premiums are not uncommon. In addition, firms are often willing to guarantee compensation for these recruits for some period of time.

29. Other factors can also lead to external recruiting. For example, while firms seek to recruit and develop staff who work well with their client base, not every relationship works optimally. In some cases, a firm seeks to make a change in coverage (notably in sales or banking roles). If possible, the change in coverage will be done with a member of the existing coverage team, but the firm sometimes concludes that it does not have the appropriate resource on the team and needs to recruit externally for the necessary skill, experience, and client relationships.

30. Because of recruiting premiums, new recruits into the firm may be paid substantially more than existing staff performing similar roles. This may be true even if the recruited staff have a "lower level" title or fewer years of experience. Among the costs that recruiting firms typically incur are buyouts of deferred awards that would be lost upon departure, a one-time recruiting premium as an inducement to take the risk of moving, and in some cases an actual recruiting bonus.

31. Similarly, firms may have to pay to retain employees who are being recruited away to join other firms. Just as a firm may be willing to pay a substantial premium to recruit an employee with valuable skills, knowledge, or client relationships, a firm may have to pay a significant premium to retain an especially valuable employee. If the employee (or sometimes team of employees) that is being recruited by a competitor is highly rated or in an area with limited depth of resources, the firm will typically match the offer being made by the competitor. This new "matched" level of pay will typically be higher than that received by colleagues in the same department.

VII. Manager Discretion in Setting Compensation

32. Given the variety and complexity of jobs in the financial services industry, manager discretion in setting compensation is both typical and essential. There is no single set of criteria that can be mechanistically or rigidly applied to determine compensation.

33. The main factors in setting compensation at financial services firms are a combination of firm, division, unit, and individual performance. At the individual level, the primary quantitative factor in measuring performance is productivity. Productivity standards necessarily vary by business area due to differences in how each business operates. They may also vary within each business area as well. For example, two salespeople on an investment grade bond desk with similar production numbers may be paid differently because the clients covered by one of them present greater challenges in terms of interest in the product.

34. Key productivity categories by line of business may include:

(a) Investment Banking: revenues to the division specifically and the firm in general from clients covered by the division, market share, profit margin, industry recognition (association and industry publication awards), and client feedback;

(b) Equities: revenues, market share, capital utilized, trading losses to support customer business, profit (absolute), profit margin, and risk adjusted return on capital;

(c) FICC: revenues, capital utilized, profit, profit margin, and risk adjusted return on capital;

(d) Merchant Banking: Revenues (both management fees and carried interest), return on capital, and profit; and

(e) Investment Management: Revenues, assets under management ("AUM"), growth in AUM, net new AUM, and performance relative to established benchmark or index.

35. While firms in the financial services industry historically operated commission plans, they moved away from a pure commission structure starting in the mid-1980s, in part because institutionally focused businesses like Equities and FICC (as opposed to retail brokerage) became more complicated and interdependent, making it more difficult to identify formulaically which person or team of people added value and in what proportion. The fact that these firms do not use a commission system does not mean that they do not measure and value

sales volume/activity. Rather, it is that the firm cannot necessarily attribute with a set algorithm the value to a particular sales person or trader in the same fashion as they can in a retail customer focused business. The complexity of many transactions is such that there may be multiple salespeople as well as other functions (such as trading, structuring, and research) involved in supporting a sale. Hence, manager judgment in evaluation of contribution to the overall firm is necessary across a range of functions.

36. The entire financial services industry has shifted from a focus on quantitative performance factors (in some cases solely) to a mix of qualitative and quantitative factors, and performance assessment has become more complicated and necessarily requires a greater degree of judgment. Firms have developed a number of more qualitative factors to evaluate individual performance. These include:

(a) Quality of Revenues (e.g., revenues from M&A transaction where the firm is given exclusive sale rights or trades to be done at market without the firm committing capital are better than the revenues associated with transactions where the firm is in competition or has to commit capital);

(b) Indicative Cost of Execution (e.g., some products such as listed US equity trades have very identifiable costs of execution at the time of the transaction whereas the cost of customized derivative transactions can only be estimated upfront and as such requires advanced risk assessment skills);

(c) Role of Team/Individual versus value of franchise (e.g., each firm's franchise value differs by product, with some firms being known as the 'best' or 'most capable' in an area—in those areas, employees add less value to any given transaction than in areas where the firm does not have a strong franchise);

(d) Utilization of Resources (e.g., many categories of transactions are not standardized in their structure or execution and, therefore, can require more or less resources to complete (and thus impose differing capital and other costs) and the amount of resources required is not known upfront nor necessarily quantified);

(e) Client Feedback (e.g., the industry obtains client feedback directly and through third party consulting firms specializing in this activity);

(f) Feedback from managers and peers in other units who have interacted with the team/individual;

(g) Teamwork;

(h) Development of junior staff; and

(i) Assistance in recruiting.

37. These qualitative factors can be defined to some extent, but their application to a particular employee in a particular job in a particular year invariably requires manager judgment. For instance, measuring performance in culture-oriented aspects and in the risk-related aspects of the job is more difficult than in revenue production or activity levels (such as number of client calls or pitch meetings). As such, the degree of importance that a firm places on elements such as teamwork is harder to determine (i.e., firms often do not have an actual percentage weighting on each performance category). In my experience with the financial services industry, significant manager judgment in determining compensation employee by employee is a constant, and a necessary one.

38. Reflecting the impracticality of setting compensation based only on objective measures, a key difference between the financial services industry (including banking/securities) and most other industries is in the significance of annual bonuses in the financial services industry.

VIII. The Need for Precision in Setting Compensation

39. In my experience, financial industry firms expend great effort and resources in seeking to match compensation with employee contribution and market conditions. As is true in other industries, firms in the financial services industry rely on people, products, services and capital to be successful against their competitors. Relative to many other industries, however, the financial services industry is highly reliant on the people portion of the equation. Furthermore, as discussed in more detail below, movement of professionals between financial services firms is common. These factors—the significance of human capital in the financial services industry and high employee mobility—lead to a heightened focus in the financial services industry on accurately correlating compensation, employee contribution and retention of talent.

40. The following table shows the percentage of costs associated with compensation and benefits for banks.

Compensation & Benefits Expense as a Percentage of Total Cost

	2011	*2012*	*2013 (9M)**
Median	54%	50%	54%
Range	46% - 70%	43% - 61%	43% - 62%

Comparison group includes: Bank of America, Barclays, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan Chase, Morgan Stanley, and UBS.
** Only six months of data is available for Barclays.*

41. Reflecting the importance of pay in the financial services industry, Compensation & Benefits as a percentage of revenues is considered a critical performance metric by investors and research analysts covering the industry. Research analysts covering financial services firms examine the usual range of performance metrics that exist for companies in other industries, such as revenue growth, return on equity, earnings per share, and dividends. Uniquely, in my experience, research analysts covering financial services firms also specifically focus on a firm's ability to manage employee costs as measured by a ratio of compensation and benefits costs to net revenues. This ratio is publicly reported by major banks and is compared by research analysts to other firms to determine if the bank is as efficient as competitors in managing this critical cost (which is far and away the biggest single cost in the industry and is a multiple of facilities, technology or advertising costs). This is not true for many other industries, including firms such as software companies where employees are also the primary asset and cost. Firms in many other industries do not publicly report their expenditure on compensation and benefits, nor do investors focus on it as a key performance metric.

42. One reason the financial services industry is so heavily reliant on people in the business areas in question is that there are relatively few distinctions in product offerings across the industry. While individual firms do develop new products and unique services, for the most part they do not receive copyright or other legal protection, and new products are duplicated by competitors rapidly—often within weeks, rather than months or years as is the case in industries such as technology and pharmaceuticals. Therefore, each firm relies heavily on the quality of its staff to deliver the same or equivalent products and services in a manner superior to that of its competitors.

43. Another factor that impacts the importance of pay in the financial services industry is the high degree of overlap in physical location. Every major firm is co-located in the

same major cities around the globe (e.g., New York, London, Tokyo, and Hong Kong) and therefore is competing in the same labor markets for talent. There is limited, if any, competitive advantage to a firm's location, and there is the disadvantage that similarity in location makes it easy for firms to recruit from their competitors and easy for candidates to accept an offer; changing jobs generally does not even require a change in commute.

44. In addition, there are many business activities within these firms (e.g., M&A and client trading) where capital is not a material factor in generating business and, therefore, a firm does not easily gain a competitive recruiting or retention edge by being better capitalized than its competitors. (This is not to diminish the importance of overall capital strength for these banks.)

45. While no individual firm typically gains much of a time advantage versus its competitors with new product offerings, firms do seek to develop new products regularly in order to serve evolving client needs. Obviously, a firm will also take advantage of any small lead in being first to market.

46. Limitations in product development advantage in the financial services industry (in contrast, for example, to pharmaceutical or technology companies) also arise because for any product to be sold or traded in a market there need to be other firms to act as counterparties on transactions. Therefore, many products are developed on a multi-firm or industry association basis. That way, trading and clearing standards can be developed to ease the introduction of the new product/service and enable it to grow. Since consistency in product structure is required for ease of trading and clearing and for growth in volume, each firm in essence ends up offering the same products to its clients, increasing the ease with which employees can switch firms and heightening the need for financial services firms to set compensation properly.

IX. Conclusion

47. In sum, there is a wide variety of jobs in the financial services industry that differ in many respects, and because of the complexity and variety of jobs in the industry manager discretion in setting compensation is typical and essential. Firms within the financial services industry pay close attention to determining compensation appropriately for the various jobs in their firms. The value of these roles to the firms, and thus the compensation paid for them, differs correspondingly. Lateral hires may be critical to a firm's continued success and to its entry to new products, clients, or enhanced service delivery. Firms have to pay to secure this talent and such hires may be compensated differently from those already incumbent at the firm.

Michael P Curran
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Michael P. Curran
December 11, 2013

Appendix 1

Organizations Covered:

- Bank of America
- Barclays
- Citigroup
- Credit Suisse
- Deutsche Bank
- Goldman Sachs
- JPMorgan Chase
- Morgan Stanley
- UBS

Appendix 2

Materials Reviewed:

- First Amended Class Action Complaint
- Summary of Job Categories Used by Firms in FICC
- Index of Function to Business Area Total
- Summary of Expense Ratios

Appendix 3

Testimony Within Last Four Years:

- None

Appendix 4

[redacted]

Michael Curran is a Director of Towers Watson and has over 30 years of consulting and financial industry experience. His areas of focus include:

- Board of Directors and Executive Management advisory work.
- Strategic compensation planning and design projects in Investment and Corporate Banking, Capital Markets, Alternative Investments (Hedge Funds and Private Equity), Transaction Banking and Private Banking.
- Advising clients on how to respond to regulatory requirements related to the interaction between risk and incentive pay.

Mike works with Boards, Founders, Executive Management, Division Heads, and senior Human Resources executives on a wide range of compensation-related issues including equity and annual incentive plan design, pay for performance, and productivity measurement. His clients include leading US, Canadian and European headquartered financial service firms.

Prior to its acquisition by Towers in 2007, Mike was President of MGMC, a boutique compensation consulting firm. He was also a Managing Director and Chief Operating Officer of McLagan Partners where, among other activities, he initiated their Japan practice. In the early 1980's, Mike worked in corporate compensation and Investment Banking human resources for Morgan Stanley. He earned a degree in Industrial and Labor Relations from Cornell University.